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EXAMINER	
DISTEFANO, GREGORY A	

ART UNIT	PAPER NUMBER
2175	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/580,501	MAAS, PETRUS CHRISTIANUS	
	Examiner	Art Unit	
	GREGORY A. DISTEFANO	2175	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 January 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15 and 17-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15 and 17-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 May 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the amendment filed 1/4/2010.

2. Claims 1-15 and 17-20 are currently pending.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-4, 8-10, 12, 13, and 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen et al. (2002/0097239), hereinafter Allen, in view of Gilligan et al. (US 5,374,942), hereinafter Gilligan.

5. As per claims 1 and 8, Allen teaches the following:

an input for receiving the image data set, (pg. 2, paragraph [0014]), i.e. the storage system 12 will include a plurality of storage locations which may be divided into a program storage 16 for storing programs for execution and <u>a data storage 16 for storing data</u>. From this teaching of Allen it is clear that in order for the memory to contain such data, the system must possess an input device to place the data in memory;

a memory for storing the image data set, (pg. 2, paragraph [0014]), i.e. the storage system 12 will include a plurality of storage locations which may be divided into

a program storage 16 for storing programs for execution and a data storage 16 for storing data;

an interface for receiving instructions from a user, the interface comprising a manipulation unit, (pg. 2, paragraph [0017]), i.e. the user can, through the user interface 13, identify particular regions of the object 21 to be displayed through commands issued through the user interface 13;

a processor for, under control of a computer program, (pg. 2, paragraph [0016]), i.e. the debugger program 20 enables the processor 11 to display selected regions of the object 21 to the user on display 14;

determining the subset of images, by selecting images which for the at least one attribute of the set have values in the respective subrange and which also have the value for the additional attribute, (pg. 3, paragraph [0023]), i.e. the processor 11 enables the display 14 to display in video screen 30 the numerical values of the portion of the object 21 selected as indicated by the sliders 32 and 33;

generating a view of the subset of images, (pg. 3, paragraph [0023]), i.e. the processor 11 enables the display 14 to display in video screen 30 the numerical values of the portion of the object 21 selected as indicated by the sliders 32 and 33;

an output for providing pixel values of the view for rendering on a display (34), (pg. 3, paragraph [0023]), i.e. the processor 11 enables the display 14 to display in video screen 30 the numerical values of the portion of the object 21 selected as indicated by the sliders 32 and 33. The examiner would like to further make note of paragraph [0028] on pages 3 and 4 which discusses pixel values.

However, Allen does not explicitly teach of a method of scrolling in three dimensions without the use of a slidebar. Gilligan teaches the following:

enabling a user to select a respective subrange of the range of values for at least one of the at least one attribute defined relative to an x- or y-axis and the additional attribute defined relative to a z-axis by scrolling through an image data set substantially parallel to a horizontal x-axis of a display by moving the manipulation unit along an x-direction without use of a slidebar or moving substantially parallel to a vertical y-axis of a display by moving the manipulation unit along a y-direction without use of a slidebar, (column 1, lines 13-25), i.e. the features of the disclosed mouse are achieved by a structural improvement over a conventional mouse, consisting in including a spring loaded supplementary control signal that can be varied in magnitude and sign to control the scrolling rate and heading respectively. The structural improvement is combined with an operational method for setting the scrolling axis to a plurality of Options (i.e., the "x", y" or "z" axis), at the same time the cursor is moved (further see Figs. 6a and 6b);

enabling a user to select a value for the additional attribute by scrolling through the image data set substantially parallel to a z-axis by moving the manipulation unit along a diagonal imaginary z-axis positioned diagonally between and in a common plane with the x- direction and the y- direction without use of a slidebar, (column 1, lines 13-25), i.e. the features of the disclosed mouse are achieved by a structural improvement over a conventional mouse, consisting in including a spring loaded supplementary control signal that can be varied in magnitude and sign to control the scrolling rate and heading respectively. The structural improvement is combined with

an operational method for setting the scrolling axis to a plurality of Options (i.e., the "x", y" or "z" axis), at the same time the cursor is moved.

While Gilligan does not explicitly teach a method of scrolling the z-axis in response to moving the mouse in a diagonal direction, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the z-axis selection pattern to be that of a diagonal line. One of ordinary skill in the art would have been motivated to have made such modifications because Gilligan anticipates using the patterns of straight lines to select axes as may be seen in the Fig. 6a which is a horizontal line to select the x-axis and Fig. 6b which is a vertical line to select the y-axis. Furthermore, Gilligan never limits themselves to the patterns which may be used to represent the selection of a scrolling axis as may be seen in Gilligan's parent case US 5,313,229, column 16, claim 17. Still further, a diagonal line has been a well known technique for symbolizing a z-axis or depth value as may be seen in Allen's Fig.4A, axis 3.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Allen's three dimensional visualization system with the three dimensional scrolling system of Gilligan. One of ordinary skill in the art would have been motivated to have made such modifications because both Allen and Gilligan are analogous art in the field of scrolling in three dimensions. Furthermore, Allen teaches in page 1, paragraph [0014], that a user input device may include "a pointing device such as a mouse" and Gilligan's system is directed to such a mouse.

6. Regarding claim 2, modified Allen teaches the system of claim 1 as described above. Allen further teaches the following:

the manipulation unit comprises a pointer device and the imaginary z-axis is realized in a line extending between the x-axis and the y-axis, (pg. 1, paragraph [0014]), i.e. a user interface 13 for receiving input from a user via, for example, a keyboard and <u>a pointing device</u> such as a mouse.

Regarding applicant's limitation of the imaginary z-axis, this may be seen in Fig. 4A where axis 3 is extending in a z direction in between axes 1 and 2.

7. Regarding claim 3, modified Allen teaches the system of claim 1 as described above. Allen further teaches the following:

a mouse pointer is provided for providing visual feedback during selection of the subranges or the value of the additional attribute, (pg. 1, paragraph [0014]), i.e. a user interface 13 for receiving input from a user via, for example, a keyboard and <u>a pointing device</u> such as a mouse.

8. Regarding claim 4, modified Allen teaches the system of claim 1 as described above. Allen further teaches the following:

an indicator is provided for indicating on the display along which of the x-, y-, and z- axes scrolling is possible, (pg. 2, paragraph [0020]), i.e. the large square slider 32, in conjunction with <u>the numbers "2" and "3" in boxes</u> situated to the left of the slider 32 and the slider 33 with <u>the number "1" in the box situated to the left of slider 33</u>, <u>indicates that</u>

the object 21 whose data is to be used in the display is an object comprising an array whose elements are organized in three dimensions, that is, an object, such as an array in which each element of data is identified by a coordinate value along three axes.

9. Regarding claim 9, Allen teaches the following:

a computer readable medium carrying a computer program operative to cause a processor to perform the method of claim 8, (pg. 2, paragraph [0016]), i.e. the debugger program 20 enables the processor 11 to display selected regions of the object 21 to the user on display 14.

10. Regarding claims 10 and 13, modified Allen teaches the system of claims 1 and 8 as described above. Allen further teaches the following:

the image data set is related to medical applications. Allen anticipated their system to be utilized in medical applications as may be seen in their showings of Figs. 3B and 3C.

11. Regarding claims 12 and 15, modified Allen teaches the system of claims 1 and 8 as described above. Allen further teaches the following:

the processor is arranged for, under control of the computer program, generating a view of an indication indicating potential directions for the scrolling, (pg. 2, paragraph [0020]), i.e. the large square slider 32, in conjunction with the numbers "2" and "3" in boxes situated to the left of the slider 32 and the slider 33 with the number "1" in the box

situated to the left of slider 33, indicates that the object 21 whose data is to be used in the display is an object comprising an array whose elements are organized in three dimensions, that is, an object, such as an array in which each element of data is identified by a coordinate value along three axes.

12. Regarding claim 16, modified Allen teaches the system of claim 8 as described above. Allen further teaches the following:

imaginary z-axis is defined rotated relative to the x-axis and the y-axis (see axes of Fig. 4A),

the x-, y-, and z-axes being depicted in a plane of the display and the scrolling includes movement parallel to a corresponding one of the depicted axes, (pg. 2, paragraph [0020], i.e. the large square slider 32, in conjunction with the numbers “2” and “3” in boxes situated to the left of the slider 32, and the slider 33 with the number "1" in the box situated to the left of slider 33 indicates that the object 21 whose data is to be used in the display is an object comprising an array whose elements are organized in three dimensions, that is, an object, such as an array in which each element of data is identified by a coordinate value along three axes.

As may be seen in Allen’s Fig. 4A, axis “1” is the y-axis, axis “2” is the x-axis, and axis 3 is the z-axis.

13. Regarding claim 17, modified Allen teaches the system of claim 8 as described above. Gilligan further teaches the following:

scrolling along the x-axis includes moving a mouse left-right along an x- direction, (column 8, lines 21-23), i.e. in Fig. 6a, an approximately horizontal motion is issued to the cursor to set the scrolling axis status variable to “x”,

scrolling along the y-axis includes moving the mouse away-closer along a y-scrolling direction, (column 8, lines 28-30), i.e. in Fig. 6b, an approximately vertical motion is issued to the cursor to set the scrolling axis status variable to “y”.

However, Gilligan does not explicitly teach a method of “*scrolling along the z-axis includes moving the mouse diagonally relative to the x- and y- directions*”. It would have been obvious to one of ordinary skill in the art to have modified the mouse movement scrolling method of Gilligan to scroll in a z direction in response to a diagonal mouse movement. One of ordinary skill in the art would have been motivated to have made such modifications because, Gilligan teaches in column 8, lines 1-5, that a user may scroll along the z-axis through moving the mouse in a circle. It is simply a design choice as to the actual pattern used to represent each axis, whether that is a circle, diagonal line, or any other pattern representable through mouse movements. One of ordinary skill in the art (e.g. a computer programmer designing a mouse movement scrolling program) could have chosen any pattern possible in representing each of the possible scrolling directions.

14. As per claim 18, Allen teaches the following:

displaying a selected subset of images in a display plane, (pg. 3, paragraph [0023]), i.e. the processor 11 enables the display 14 to display in video screen 30 the

numerical values of the portion of the object 21 selected as indicated by the sliders 32 and 33;

However, Allen does not explicitly teach of a method of scrolling in three dimensions through movements of an input device. Gilligan teaches the following:

moving an input device along a first direction in a first range of directions to scroll the displayed subset of the images along a first dimension of the at least three dimensions, (column 8, lines 21-23), i.e. in Fig. 6a, an approximately horizontal motion is issued to the cursor to set the scrolling axis status variable to "x";

moving the input device along a second direction in a second range of directions to scroll the displayed subset of the images along a second dimension of the at least three dimensions, the second range of directions being orthogonal to the first range of directions, (column 8, lines 28-30), i.e. in Fig. 6b, an approximately vertical motion is issued to the cursor to set the scrolling axis status variable to "y";

moving the input device along a third direction in a third range of directions to scroll the displayed subset of the images along a third dimension of the at least three dimensions, the third range of directions being disposed diagonally relative to the first and second ranges of directions, (column 8, lines 1-3), i.e. there are three patterns defined (i.e., a horizontal line, a vertical line and a circle), each of them assigned to a different scrolling axis (i.e., "x", "y" and "z" axis).

While Gilligan does not explicitly teach a method of moving in a third direction that is diagonal to the first and second directions it would have been obvious to one of ordinary skill in the art to have modified the mouse movement scrolling method of

Gilligan to scroll in a z direction in response to a diagonal mouse movement. One of ordinary skill in the art would have been motivated to have made such modifications because, Gilligan teaches in column 8, lines 1-5, that a user may scroll along the z-axis through moving the mouse in a circle. It is simply a design choice as to the actual pattern used to represent each axis, whether that is a circle, diagonal line, or any other pattern representable through mouse movements. One of ordinary skill in the art (e.g. a computer programmer designing a mouse movement scrolling program) could have chosen any pattern possible in representing each of the possible scrolling directions.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Allen's three dimensional visualization system with the three dimensional scrolling system of Gilligan. One of ordinary skill in the art would have been motivated to have made such modifications because both Allen and Gilligan are analogous art in the field of scrolling in three dimensions. Furthermore, Allen teaches in page 1, paragraph [0014], that a user input device may include "a pointing device such as a mouse" and Gilligan's system is directed to such a mouse.

15. Regarding claim 19, modified Allen teaches the system of claim 18 as described above. Allen further teaches the following:

the first, second, and third ranges of directions are coplanar and non-overlapping and the first, second, and third dimensions are orthogonal to each other (see Allen Fig. 4A).

16. Regarding claim 20, modified Allen teaches the system of claim 18 as described above. Allen further teaches the following:

the first, second, and third directions are coplanar (see Allen Fig. 4A).

17. Regarding claim 21, modified Allen teaches the system of claim 1 as described above. Gilligan further teaches the following:

the set of attributes includes a first attribute, a second attribute, and a third attribute, (column 7, line 67 – column 8, line 3), i.e. in the preferred embodiment of the original method described in the parent application, there are three patterns defined, each of them assigned to a different scrolling axis (i.e., “x”, “y” and “z” axis), *and wherein the processor:*

selects and changes the range of values for the first attribute in response to movement of the manipulation unit along the x-direction, (column 8, lines 21-23), i.e. in Fig. 6a, an approximately horizontal motion is issued to the cursor to set the scrolling axis status variable to “x”;

selects and changes the range of values for the second attribute in response to movement of the manipulation unit along the y-direction, the y-direction being orthogonal to the x-direction, (column 8, lines 28-30), i.e. in Fig. 6b, an approximately vertical motion is issued to the cursor to set the scrolling axis status variable to “y”; and

selects and changes the range of values for the third attribute in response to movement of the manipulation unit along the z-direction, the z-direction being at 45 degrees relative to the x-direction and the y-direction, the x-direction, the y-direction,

and the z-direction being linear and coplanar, (column 8, lines 1-3), i.e. there are three patterns defined (i.e., a horizontal line, a vertical line and a circle), each of them assigned to a different scrolling axis (i.e., "x", "y" and "z" axis).

While Gilligan does not explicitly teach a method of moving in a third direction that is diagonal to the first and second directions it would have been obvious to one of ordinary skill in the art to have modified the mouse movement scrolling method of Gilligan to scroll in a z direction in response to a diagonal mouse movement. One of ordinary skill in the art would have been motivated to have made such modifications because, Gilligan teaches in column 8, lines 1-5, that a user may scroll along the z-axis through moving the mouse in a circle. It is simply a design choice as to the actual pattern used to represent each axis, whether that is a circle, diagonal line, or any other pattern representable through mouse movements. One of ordinary skill in the art (e.g. a computer programmer designing a mouse movement scrolling program) could have chosen any pattern possible in representing each of the possible scrolling directions.

18. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over modified Allen as applied to claim 1 above in view of Dobbelaar (US 6,538,672).

19. Regarding claim 5, modified Allen teaches the system of claim 1 as described above. However, Allen does not explicitly teach a method where the attributes represented by each of the three axes may be configured. Dobbelaar teaches the following:

a configuration dialog is provided for configuring which attributes are represented by each of the x, y, and z-axes, (column 7, lines 50-53), i.e. the user may be allowed to assign another program attribute to the axis 21, e.g. using on-screen display menus, which is a well known way in the art for changing system parameters.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the graphical representation method of Allen with the axis attribute setting method of Dobbelaar. One of ordinary skill would have been motivated to have made such modifications because both Allen and Dobbelaar are analogous art in the field of arranging data according to multiple axes on a display. Furthermore, as Allen describes on pg. 3, paragraph [0022], that an object element may have any number of dimensions, each associated with an axis. It would have been obvious to one of ordinary skill to present the user with a means to select which dimensions to present. As Dobbelaar teaches in column 7, lines 52-53, using on-screen display menus was a well known skill in the art for changing system parameters.

20. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over modified Allen as applied to claim 1 above in view of Gargi (US 6,915,489).

21. Regarding claim 6, modified Allen teaches the system of claim 1 as described above. However, Allen does not explicitly teach a method where an attribute is periodically increased or decreased. Gargi teaches the following:

the processor is arranged for, under control of the computer program, changing the subset by periodically increasing or decreasing the value of an attribute of the set or the value of the additional attribute, (column 5, lines 25-27), i.e. by positioning the cursor 62 in alignment with the incrementing icon 68 <u>for a set period of time</u>, <u>a second stack</u> will be presented to the user; and

changing the view according to the changed subset, (column 5, lines 25-27), i.e. by positioning the cursor 62 in alignment with the incrementing icon 68 for a set period of time, a second stack <u>will be presented to the user</u>.

It would have been obvious to one of ordinary skill in the art would have modified the data navigation method of Allen with the periodic transition method of Gargi. One of ordinary skill in the art would have been motivated to have made such modifications because Allen and Gargi are analogous art in the field of visualizing and arranging data in multiple dimensions. While Gargi's method is chiefly focused to that of image browsing, Allen shows that there method may also be directed towards images in their showings of Figs. 3b-3e. Gargi may be interpreted as a two dimensional array in that each "stack" of images presented to the user has a specific order of images. Therefore, the image data is organized in stack number and position within that stack. This is very similar to Allen's method as shown in Fig. 4A where elements are organized in a plane number and position in that plane.

22. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over modified Allen as applied to claim 1 above in view of Takabayashi et al. (US 2003/0158476), hereinafter Takabayashi.

23. Regarding claim 7, modified Allen teaches the system of claim 1 as described above. However, Allen does not explicitly teach a method where the images are periodically changed with respect to a further attribute. Takabayashi teaches the following:

the processor is arranged for, under control of the computer program, periodically increasing or decreasing a value of a further attribute of each image, said value not being selectable by scrolling substantially parallel to one of the x- and y- axes, (pg. 4, paragraph [0050]), i.e. Fig. 6 shows the flow of monitor scanning and imaging scanning according to an embodiment of the invention. Once the contrast agent has been injected, monitor scanning starts. During monitor scanning, the monitor images <u>are updated successively at a display rate of one frame per second</u>; and

changing the view according to the changed value, (pg. 4, paragraph [0050]), i.e. Fig. 6 shows the flow of monitor scanning and imaging scanning according to an embodiment of the invention. Once the contrast agent has been injected, monitor scanning starts. During monitor scanning, <u>the monitor images are updated</u> successively at a display rate of one frame per second.

The examiner interprets Takabayashi's teaching of updating an image based on time to encompass applicant's claim in that, upon the modification of Allen in view of

Takabayashi, time would be a fourth dimension and thus not be selectable by scrolling the other three axes.

It would have been obvious to one of ordinary skill in the art to have modified the three dimensional display of Allen with the time dependent display of Takabayashi. One of ordinary skill in the art would have been motivated to have made such modifications because both Allen and Takabayashi are analogous art in the field of presenting images in a three dimensional environment (see Takabayashi Fig. 4). Furthermore, both arts show similar methods of placing elements in sets of planes as may be seen in Allen's showing of Fig. 4A and Takabayashi's showing of separate slices of a MIP image as shown in Figs. 4b and 4c.

24. Claims 11 and 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over modified Allen as applied to claims 1 and 8 above in view of Sezaki et al. (US 6,078,313), hereinafter Sezaki.

25. Regarding claims 11 and 14, modified Allen teaches the system of claims 1 and 8 as described above. However, Allen does not explicitly teach a method where the scroll speed is increased if the scrolling is maintained. Sezaki teaches the following:

the processor is arranged for, under control of the computer program, increasing the selected subrange at a faster rate than initially in response to the scrolling being maintained, (column 10, lines 35-40), i.e. the second period may be set longer than the first period, or the second period need not be a fixed period. For example, when the

second period is set to gradually shorten, the scroll speed can be gradually increased with an increase in the elapse of click-on time.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified the three dimensional scroll method of Allen with the gradual scroll speed increase of Sezaki. One of ordinary skill would have been motivated to have made such further modifications because all of Allen, Gilligan, and Sezaki are analogous art in the field of scrolling data.

Response to 37CRF 1.132 Declaration

26. While the examiner duely respects the background and credentials of Petrus C.F. MAAS, the 1.132 declaration filed 1/4/2010 appears to be purely the opinion of Mr. Maas and shows no support through actual fact. As such the declaration fails to provide sufficient evidence to overcome the rejections, which are therefore maintained at the present time.

Response to Arguments

27. Applicant's arguments filed 1/4/2010 have been fully considered but they are not persuasive. Applicant argues on pages 8-11 that the examiner has failed to provide sufficient proof that it was well known in the art at the time the invention was made to have graphed the z-axis in between the x- and y-axes.

The examiner respectfully disagrees.

Firstly, in response to applicant's statements directed toward US 5,313,229, the examiner would like to note that the Gilligan reference is in fact a continuation from the '229 reference. Next, for the purpose of support of the rejection that is was well-known at the time to present the z-axis between the x- and y-axes, the examiner would like to site the reference of "Calculus Third Edition", by James Stewart, hereinafter Calculus. As may be seen in Figure 1 on page 3 of Calculus, the x-axis is clearly shown as being exactly between the z- and y-axes. While this is the x-axis and not specifically named the z-axis it is clear through the teaching of Calculus that the axes may be relabeled so that the z-axes is that which is the diagonal. For example, Calculus teaches in 11.1 that the three axes are perpendicular and we think of the x- and y-axes as being the horizontal and the z-axis being the vertical. This is further shown in Allen's showing of Figure 4A where Allen shows three axes where "Axis 3" is a horizontal between Axes 1 and 2. As may be seen within the object cube of Figure 4A, "Axis 3" is in fact the z value. Axes 1 and 2 define the flat surface of the cube where Axis 3 defines the depth or layer within the cube.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GREGORY A. DISTEFANO whose telephone number is (571)270-1644. The examiner can normally be reached on Monday through Friday, 9 a.m. - 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Bashore can be reached on 571-272-4088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/GREGORY A DISTEFANO/
Examiner, Art Unit 2175
3/30/2010

/William L. Bashore/

Supervisory Patent Examiner, Art Unit 2175